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Cant

the 15-amino-acid insertion was not indispensable in its biological activity. Its presence in the NT-7 molecule might be accessory to its neurotrophic function, such as binding to extracellular matrix which helped to localise the factor in the target area. If that is the case, it will be interesting to examine whether NT-7, like NT-6, binds to heparan sulfate or other types of molecules present in the extracellular matrix.--

IN THE CLAIMS:

Please replace claims 1, 3 and 4:

B2

Sub E1 1. (Twice Amended) An essentially purified neurotrophin of carp, carp NT-7 having neurotrophic activity and an amino acid sequence [SEQ ID NO.: 1] as follows:

Lys Ala Asn Asp Phe Leu His Arg Gly Glu Tyr Ser Val Cys Asp
Ser Glu Glu His Trp Val Gly Asn Leu Thr Gln Ala Thr Asp Leu
Arg Gly Asn Glu Val Thr Val Leu Pro His Val Arg Ile Asn Asn
Val Val Lys Lys Gln Met Phe Tyr Glu Thr Thr Cys Arg Val Ser
Lys Pro Ile Gly Ala Pro Lys Pro Gly Gln Gly Val Ser Gly Val
Lys Ala Gly Thr Ser Ser Cys Arg Gly Ile Asp Asn Glu His Trp
Asn Ser Tyr Cys Thr Asn Val His Thr Phe Val Arg Ala Leu Thr
Ser Tyr Lys Asn Gln Ile Ala Trp Arg Phe Ile Arg Ile Asn Ala
Ala Cys Val Cys Val Leu Ser Arg Asn Ser Trp Arg His

or functional variants, analogues and functional fragments of NT-7.

Sub E2 3. (Twice Amended) A composition comprising an essentially purified neurotrophin of carp, carp NT-7 having neurotrophic activity and an amino acid sequence [SEQ ID NO.: 1] as follows:

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Lys Ala Asn Asp Phe Leu His Arg Gly Glu Tyr Ser Val Cys Asp
Ser Glu Glu His Trp Val Gly Asn Leu Thr Gln Ala Thr Asp Leu
Arg Gly Asn Glu Val Thr Val Leu Pro His Val Arg Ile Asn Asn
Val Val Lys Lys Gln Met Phe Tyr Glu Thr Thr Cys Arg Val Ser

B3
Out

Lys Pro Ile Gly Ala Pro Lys Pro Gly Gln Gly Val Ser Gly Val
Lys Ala Gly Thr Ser Ser Cys Arg Gly Ile Asp Asn Glu His Trp
Asn Ser Tyr Cys Thr Asn Val His Thr Phe Val Arg Ala Leu Thr
Ser Tyr Lys Asn Gln Ile Ala Trp Arg Phe Ile Arg Ile Asn Ala
Ala Cys Val Cys Val Leu Ser Arg Asn Ser Trp Arg His

or functional variants, analogues and functional fragments of NT-7.

4. (Twice Amended) A method of treating acute and/or chronic neuronal injury or degenerative states for a specific subclass of neurons, comprising administering to a subject an essentially purified neurotrophin of carp, carp NT-7 of claim 1.

Please add the following new claims:

6. (New) An essentially purified polypeptide having neurotrophic activity comprising

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Lys Ala Asn Asp Phe Leu His Arg Gly Glu Tyr Ser Val Cys Asp
Ser Glu Glu His Trp Val Gly Asn Leu Thr Gln Ala Thr Asp Leu
Arg Gly Asn Glu Val Thr Val Leu Pro His Val Arg Ile Asn Asn
Val Val Lys Lys Gln Met Phe Tyr Glu Thr Thr Cys Arg Val Ser
Lys Ala Gly Thr Ser Ser Cys Arg Gly Ile Asp Asn Glu His Trp
Asn Ser Tyr Cys Thr Asn Val His Thr Phe Val Arg Ala Leu Thr
Ser Tyr Lys Asn Gln Ile Ala Trp Arg Phe Ile Arg Ile Asn Ala
Ala Cys Val Cys Val Leu Ser Arg Asn Ser Trp Arg His.

7. (New) A composition comprising an essentially purified neurotrophin of carp NT-7, having neurotrophic activity which comprises:

Lys Ala Asn Asp Phe Leu His Arg Gly Glu Tyr Ser Val Cys Asp
Ser Glu Glu His Trp Val Gly Asn Leu Thr Gln Ala Thr Asp Leu

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Contra.

Arg Gly Asn Glu Val Thr Val Leu Pro His Val Arg Ile Asn Asn
Val Val Lys Lys Gln Met Phe Tyr Glu Thr Thr Cys Arg Val Ser
Lys Ala Gly Thr Ser Ser Cys Arg Gly Ile Asp Asn Glu His Trp
Asn Ser Tyr Cys Thr Asn Val His Thr Phe Val Arg Ala Leu Thr
Ser Tyr Lys Asn Gln Ile Ala Trp Arg Phe Ile Arg Ile Asn Ala
Ala Cys Val Cys Val Leu Ser Arg Asn Ser Trp Arg His.

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8. (New) An essentially purified polypeptide having neutrophilic activity comprising, wherein the sequence comprises SEQ ID NO:1, wherein SEQ ID NO:1 has 15 consecutive amino acids deleted between the second and third cysteines.

9. (New) A composition comprising the essentially purified polypeptide of claim 8.